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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/056,163

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Victor F. Petrenko

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30955

7590

07/01/2004

LATHROP & GAGE LC
4845 PEARL EAST CIRCLE
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BOULDER, CO 80301

EXAMINER

MAYO III, WILLIAM H

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

my

Office Action Summary

Application N .

10/056,163

Applicant(s)

PETRENKO ET AL.

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:
2. If applicant desires priority under 35 U.S.C. 120 based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. ____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35

U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2831

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 15-18, 20, 30-34, 36-52, and 54-46 are rejected under 35

U.S.C. 102(b) as being anticipated by Shimada et al (Pat Num 4,190,137, herein referred to as Shimada). Shimada discloses a system (Figs 1-5) for de-icing a trolley wire (i.e., cableway; Col 1, lines 5-11). Specifically, with respect to claim 1, Shimada discloses a system (Fig 4) comprising a cableway (11R, 11S, 11T) and a power source (not shown, Cols 2-3, line 65-68 & 1-15 respectively) electrically connected to the cableway (11R, 11S, 11T) for providing alternating current to the cableway (11R, 11S, 11T), thereby heating the cableway (11R, 11S, 11T, Col 3, lines 10-15). With respect to claim 15, Shimada discloses that the cableway (11R, 11S, 11T) comprises a first cable segment (denoted by left L in Fig 2) containing a first cable span (left side), a second cable segment (denoted by right L in Fig 2) containing a second cable span (right side), wherein the first cable segment (denoted by left L) is connected to a power source (not shown, at 21), and the second cable segment (denoted by right L in Fig 2) is connected to a power source (not shown, at second 21) separately from the first cable source (denoted by left L). With respect to claim 16, Shimada discloses that the first cable segment (denoted by left L in Fig 2) is connected to a switch (21) which is connected to a power source (not shown) separately from the second cable segment (denoted by right L in Fig 2). With respect to claim 17, Shimada discloses that a first transformer (left 30) which is connected to the power source (not shown) and the first cable segment (denoted by left L in Fig 2) and a second transformer (right 30) which is connected to the power source (not shown) and the second cable segment (denoted by right L in Fig

2). With respect to claim 18, Shimada discloses a plurality of power sources (not shown), wherein the cableway (11R, 11S, 11T) comprises a first cable segment (denoted by left L in Fig 2) containing a first cable span (left side), a second cable segment (denoted by right L in Fig 2) containing a second cable span (right side), wherein the first cable segment (denoted by left L) is connected to a power source (not shown, at 21) in a first circuit (Fig 3), and the second cable segment (denoted by right L in Fig 2) is connected to a second power source (not shown, at second 21) separately from the first cable source (denoted by left L) in a second circuit (Fig 3). With respect to claim 20, Shimada discloses a system (Fig 4) comprising a conductors (11R, 11S, 11T) and a power source (not shown, Cols 2-3, line 65-68 & 1-15 respectively) electrically connected to the conductors (11R, 11S, 11T), wherein the elongated conductors (11R, 11S, 11T) comprises a conductor span (denoted by left and right L), wherein each span (left and right L) are connected to separate power sources (not shown) through separate switches (21). With respect to claim 30, Shimada discloses that the cableway (11R, 11S, 11T) comprises a first cable segment (denoted by left L in Fig 2) containing a first cable span (left side), a second cable segment (denoted by right L in Fig 2) containing a second cable span (right side), wherein the first cable segment (denoted by left L) is connected to a power source (not shown, at 21), and the second cable segment (denoted by right L in Fig 2) is connected to a power source (not shown, at second 21) separately from the first cable source (denoted by left L). With respect to claim 31, Shimada discloses that the first cable segment (denoted by left L in Fig 2) is connected to a switch (21) which is connected to a power source (not shown)

separately from the second cable segment (denoted by right L in Fig 2). With respect to claim 32, Shimada discloses that a first transformer (left 30) which is connected to the power source (not shown) and the first cable segment (denoted by left L in Fig 2) and a second transformer (right 30) which is connected to the power source (not shown) and the second cable segment (denoted by right L in Fig 2). With respect to claim 33, Shimada discloses that the first transformer (left 30) is switchably connected to a power source (not shown) from the second transformer (right 30) via the two switches (left and right 21). With respect to claim 34, Shimada discloses a plurality of power sources (not shown), wherein the cableway (11R, 11S, 11T) comprises a first cable segment (denoted by left L in Fig 2) containing a first cable span (left side), a second cable segment (denoted by right L in Fig 2) containing a second cable span (right side), wherein the first cable segment (denoted by left L) is connected to a power source (not shown, at 21) in a first circuit (Fig 3), and the second cable segment (denoted by right L in Fig 2) is connected to a second power source (not shown, at second 21) separately from the first cable source (denoted by left L) in a second circuit (Fig 3). With respect to claim 36, Shimada discloses a method for de-icing a cableway (11R, 11S, 11T) comprising applying electrical power to a cable span (left and right L, Fig 2). With respect to claim 37, Shimada discloses a method, wherein applying electric power is separately applied to a cable span (left and right L) via the separate switches (left and right 21). With respect to claims 38-40, Shimada discloses a method wherein applying electric power comprises applying electric power to at least one cable span (left L), and not applying power to at least one cable span (right L, Col 4, lines 26-56), thereby

applying electrical power separately to a cable segment (Col 4, lines 26-56). With respect to claim 44, Shimada discloses a method wherein the cableways (11R, 11S, 11T) has a plurality of spans (left and right L), and further comprising steps of: electrically connecting the first end of a plurality of spans (left ends) to a first terminal of a power source (at left and right 21); and applying electric power to the plurality of connected spans (left and right sides) by activating switches (left and right 21). With respect to claim 45, Shimada discloses that the second ends (right sides of left and right L) are connected to ground via the ground at the substation (20). With respect to claim 46, Shimada discloses a method further comprising applying power to a first transformer (left 30) that is electrically connected to the cableway (11R, 11S, 11T), such that the first transformer (left 30) reduces the voltage and increases the current of the power (Col 10, lines 29-43). With respect to claim 47, Shimada discloses a method comprising applying power to the first transformer (left 30) and a second transformer (right 30), wherein the first transformer (left 30) is connected to a first cable segment (left side) containing at least a first cable span (denoted as left L), the second transformer (right 30) connected to a second cable segment (right side) containing at least a second cable span (denoted as right L). With respect to claim 48, Shimada discloses a method, wherein applying electric power is separately applied to a cable span (left and right L) via the separate switches (left and right 21). With respect to claim 49, Shimada discloses a method wherein applying electric power comprises applying electric power to at least one cable span (left L), simultaneously. With respect to claim 50-52, Shimada discloses a method wherein applying electric power comprises applying

electric power to at least one cable span (left L), and not applying power to at least one cable span (right L, Col 4, lines 26-56), thereby applying electrical power separately to a cable segment (Col 4, lines 26-56). With respect to claim 54, Shimada discloses a method further comprising applying power to a first transformer (30) that is electrically connected to the elongated conductor (11R, 11S, 11T), such that the first transformer (30) reduces the voltage and increases the current of the power (Col 10, lines 29-43). With respect to claim 55, Shimada discloses that applying power to the first transformer (left 30) and a second transformer (right 30), wherein the first transformer (left 30) is connected to a first conductor segment (11R, 11S, 11T), wherein the second transformer (right 30) is connected to a second conductor segment (right L). With respect to claim 56, Shimada discloses that applying power from a first power source (not shown) to a first conductor segment (left side), and applying power from a second power source (not shown) to a second conductor segment (right side) via the switches (left and right 21).

5. Claims 1-2, 4, 6-14, 20-21, and 22-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Genrikh et al (Pat Num 4,135,221, herein referred to as Genrikh). Genrikh discloses a system (Figs 1-50) for de-icing a cableway (Col 1, lines 5-10). Specifically, with respect to claim 1, Genrikh discloses a system (Fig 2) comprising a cableway (8) and a power source (1) electrically connected to the cableway (8) for providing alternating current to the cableway (8), thereby heating the cableway (8, Col 1, lines 44-55). With respect to claim 2, Genrikh discloses that the power source (1) provides AC to the cable (8) via the three phase transformers (2 & 3). With respect to

claim 4, Genrikh discloses that the power source (1) may be DC via the converter (10). With respect to claim 6, Genrikh discloses that the system (Fig 2) further comprises a transformer (2 & 3), whereby the power source (1) provides power having high voltage and the transformer (2 & 3) is capable of stepping down the high voltage to low voltage (Col 9, lines 20-28). With respect to claim 7, Genrikh discloses that the cable (8) comprises a cable span (9) that is separately connected to the power source (1, Fig 1). With respect to claim 8, Genrikh discloses that the system (Fig 1) further comprises a circuit connection (10) and may comprise a plurality of cable spans (9), wherein each cable span (9) has a first end and second end (left and right ends of 9), wherein the first ends (left end of 9) is electrical connected through the circuit (10) to the power terminal (node of power source, Fig 2). With respect to claim 9, Genrikh discloses that the circuit connection (10) may be connected to ground (Fig 1) by switch means (4, Fig 1). With respect to claim 10, Genrikh discloses that the second end (right end) of the cable spans (9) are electrically connected to a ground (via 7, 5, & 3, Fig 1). With respect to claim 11, Genrikh discloses that the system (Fig 1) may further comprise a plurality of cable spans (9), wherein each cable span (9) has a first end and second end (left and right ends of 9), a first power bus (6) connected to the first terminal (node) of the power source (1) and a second bus (7) wherein the first end (left end) of the plurality of cable spans (9) is electrically connected to the first bus (9) and the second end (right end) of the plurality of cable spans (9) is electrically connected to the second power bus (7, Fig 1). With respect to claim 12, Genrikh discloses that the first terminal (node) is a power terminal (i.e. node of power source) and the second power bus (7) is connected to the

second terminal of the power source (not shown on right side, Fig 1). With respect to claim 13, Genrikh discloses that the second power bus (7) is connected to electrical ground (via 5 & 3, Fig 1). With respect to claim 14, Genrikh discloses that the system (Fig 1) further comprises a first end station (at 6) connected to electrical ground (via switch 4), a second end station (at 7) connected to electrical ground (via switch 5), wherein the cableway (9) is connect to electrical ground at the first and second end stations (via switches 4 & 5). With respect to claim 20, Genrikh discloses a system (Fig 2) comprising a elongated conductor (8) and a power source (1) electrically connected to the conductor (8), wherein the conductor (8) comprises a conductor span (9) wherein the span (9) is connected to the power source (1, Col 1, lines 44-55). With respect to claim 21, Genrikh discloses that the power source (1) provides AC to the conductor (8) via the three phase transformers (2 & 3). With respect to claim 23, Genrikh discloses that the power source (1) may be DC via the converter (10). With respect to claim 24, Genrikh discloses that the system (Fig 2) further comprises a transformer (2 & 3), whereby the power source (1) provides power having high voltage and the transformer (2 & 3) is capable of stepping down the high voltage to low voltage (Col 9, lines 20-28). With respect to claim 25, Genrikh discloses that the system (Fig 1) may further comprise a plurality of cable spans (9), comprising a first conductor segment (8) containing a first conductor span (9), and a second conductor segment (additional 8) containing at least a second conductor span (additional 9) , wherein the first conductor span (has a first end and second end (left and right ends of 9), a first power bus (6) connected to the first terminal (node) of the power source (1) and a second bus (7)

wherein the first end (left end) of the plurality of cable spans (9) is electrically connected to the first bus (9) and the second end (right end) of the plurality of cable spans (9) is electrically connected to the second power bus (7, Fig 1). With respect to claim 26, Genrikh discloses that the circuit connection (10) may be connected to ground (Fig 1) by switch means (4, Fig 1). With respect to claim 27, Genrikh discloses that the system (Fig 1) may further comprise a plurality of cable spans (9), wherein each cable span (9) has a first end and second end (left and right ends of 9), a first power bus (6) connected to the first terminal (node) of the power source (1) and a second bus (7) wherein the first end (left end) of the plurality of cable spans (9) is electrically connected to the first bus (9) and the second end (right end) of the plurality of cable spans (9) is electrically connected to the second power bus (7, Fig 1). With respect to claim 28, Genrikh discloses that the first terminal (node) is a power terminal (i.e. node of power source) and the second power bus (7) is connected to the second terminal of the power source (not shown on right side, Fig 1). With respect to claim 29, Genrikh discloses that the second power bus (7) is connected to electrical ground (via 5 & 3, Fig 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3, 5, 19, 22, and 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Genrikh (Pat Num 4,135,221). Genrikh discloses a system (Figs 1-50) for de-icing a cableway (Col 1, lines 5-10), as applied to claims 1-2, 20-21, 36, 39, and 50 above.

However, Genrikh doesn't necessarily disclose the AC frequency being in the range of 50-200 HZ (claim 3), nor the power source providing power in the range of 5-100 watts (claims 5 & 22), nor the system having power in the range of 10-20V (claims 19 & 35).

With respect to claims 3, 5, 19, 22, and 35, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Genrikh to comprise the AC frequency being in the range of 50-200 HZ, the power source providing power in the range of 5-100 watts , and the system having power in the range of 10-20V, since it has been held that where the general conditions of a claim

are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

9. Claims 41-43 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada (Pat Num 4,190,137). Shimada discloses a system (Figs 1-5) for de-icing a trolley wire (i.e., cableway; Col 1, lines 5-11), as detailed above with respect to claims 36, 39, and 50 above.

However, Shimada doesn't necessarily disclose the AC frequency being in the range of 50-200 HZ (claims 43 & 53), nor the power source providing power in the range of 5-100 watts (claim 42), nor the system having power in the range of 10-20V (claim 41).

With respect to claims 41-43 and 53, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Shimada to comprise the AC frequency being in the range of 50-200 HZ, the power source providing power in the range of 5-100 watts, and the system having power in the range of 10-20V, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Burgsdorf (Pat Num 4,082,962), Genrikh et al (Pat Num 4,119,866), Genrikh et al (Pat Num 4,085,338), Greenfield et al (Pat Num

2,870,311), and Allaire et al (Pat Num 6,207,939), all of which discloses various methods.

Communication

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WHM III
June 24, 2004

William H. Mayo III
Primary Examiner
Art Unit 2831